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### REMARKS

Claims 1-4 have been canceled without prejudice or disclaimer. Claims 5-11 are new and supported by, for example, original claims 1-4 and throughout the Specification. There is no new matter. Reexamination and reconsideration of the application are requested.

New claims 5-11 are patentable over Chambers (US 6126794) in view of Bockris et al. (US 4734168) and further in view of Weinberg et al. (US 6638413). Chambers does not disclose all of the required elements of claims 5-11. Bockris et al. does not remedy the deficiencies of Chambers. Weinberg et al. does not remedy the deficiencies of Chambers and/or Bockris et al.

For example, Bockris et al. teaches that the photocathode is a p-silicon and the photoanode is n-silicon (column 3, lines 22-23). Accordingly, Bockris et al.'s photocathode is fixed to a negative terminal and the photoanode is fixed to a positive terminal. Thus, Bockris et al.'s photocathode and photoanode are not exchangeably connected to the positive terminal and negative terminals. Further, even if Bockris et al.'s photocathode and photoanode were exchangeable in connection to the positive and negative terminals, which Applicants are not conceding, the device would not work as intended because Bockris et al.'s use of p-silicon for the photocathode and n-silicon for photoanode.

Further, Weinberg et al. teaches having multiple steps wherein the sequences of voltages reciprocate between the first and second voltage regimes, which includes a first step of applying a negative voltage for cathode absorption of hydrogen and a second step of "applying a positive potential sufficient for cleaning the electrodes" (column 2, lines 49-63). Weinberg et al. teaches that this second step of cleaning the electrodes "should be sufficient to effectuate a change in the potential at the cathode and bring about a compaction or compression of the hydrogen imbibed by the isotopic hydrogen storage cathode during the first cell voltage regime" (column 7, lines 1-6). Accordingly, Weinberg et al.'s second step "compresses" hydrogen produced in the first step. Weinberg et al.'s second step does not produce hydrogen.

In contrast, claims 5-11 require a first electrode and a second electrode including a semiconductors or semiconductor compounds, and configured to be exchangeably connected to the positive terminal and the negative terminal, wherein the hydrogen activating apparatus has a first state having the first electrode connected to the positive terminal and the second electrode is connected to the negative terminal wherein application of the pulse electric power between the

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first electrode and the second electrode activates hydrogen atoms contained in the water or the liquid to produce hydrogen gas, and a second state having the first electrode connected to the negative terminal and the second electrode is connected to the positive terminal, wherein application of the pulse electric power between the first electrode and the second electrode activates hydrogen atoms contained in the water or the liquid to produce hydrogen gas.

For at least the above reasons, claims 5-11 are patentable over Chambers in view of Bockris et al. and further in view of Weinberg et al. Applicants respectfully request a favorable reexamination and reconsideration of the claims.

In view of the above, early issuance of a notice of allowance is solicited. Any questions regarding this communication can be directed to the undersigned attorney, Curtis B. Hamre, Reg. 29,165, at (612)455-3802.



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By:

A handwritten signature in cursive script, appearing to read "Curtis B. Hamre".

Curtis B. Hamre  
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CBH/ajk/tk